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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,223	09/15/2003	Masakazu Koizumi	10873.1301US01	2121
52835	7590	12/02/2005	EXAMINER	
HAMRE, SCHUMANN, MUELLER & LARSON, P.C.			NGUYEN, CHAU N	
P.O. BOX 2902-0902				
MINNEAPOLIS, MN 55402			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EL

<b>Office Action Summary</b>	<b>Application No.</b> 10/663,223	<b>Applicant(s)</b> KOIZUMI ET AL.	
	<b>Examiner</b> Chau N. Nguyen	<b>Art Unit</b> 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michiya (6,296,493) in view of Hotta et al. (6,245,175).

Michiya discloses a pressure welding type anisotropic conductive elastic connector (Figures 5A and 5B) comprising plural beryllium copper wires arranged linearly and regularly in the thickness direction of a silicone rubber, the pressure welding type anisotropic conductive elastic connector being produced by the process comprising the steps of: arranging the beryllium copper wires on a thin unvulcanized silicone rubber sheet in parallel to each other. the beryllium copper wires being insulation-coated, curing the thin unvulcanized silicone rubber sheet in this state so as to form a cured rubber sheet: further adhering a thin unvulcanized silicone rubber sheet on the beryllium copper wires arranged on the cured rubber sheet to provide an adhered sheet: laminating a plurality of the adhered sheets so as

to form a block form, heating and vulcanizing the block-formed laminate in this state so as to form a cured sheet, and slicing the sheet, wherein an electric insulation coating is formed to a thickness of  $1\mu\text{m}$  or more on side faces of the beryllium copper wires and the beryllium copper wires are arranged in the direction of the arrangement (col. 8, line 55 through col. 9, line 9). Michiya also discloses the beryllium copper wires being coated with nickel and gold respectively (col. 8, lines 55-56).

Michiya does not specifically disclose the beryllium copper wires being arranged with a pitch interval of 0.01mm or less nor end faces of the beryllium copper wires being plated with nickel and gold respectively.

Hotta et al. discloses an anisotropic conductive film comprising a plurality of wires being arranged with a pitch interval of 0.01mm in the direction of the arrangement (Figures 1 and 2, col. 5, lines 54-57). It would have been obvious to one skilled in the art to choose suitable pitch interval for the wires of Michiya, including the pitch interval of 0.01mm as taught by Hotta et al., to meet the specific use of the resulting conductive film since it is taught by Hotta et al. that the conductivity of the film would be decreased or increased depending on the pitch interval of the wires.

Although not specifically disclosed by Michiya, it would have been obvious to one skilled in the art to also provide the end faces of the Michiya beryllium copper wires with nickel and gold respectively as Michiya did for the length of the wires to further protect the end faces of the wires from being corrosive. Note that the electric insulation coating in Michiya would have a withstand voltage of  $1\text{V}/\mu\text{m}$  or more since it comprises structure and material as claimed.

The modified connector of Michiya also discloses the ends of the wires being exposed from the silicone rubber and having a length that is substantially the same as the thickness of the insulation elastic resin material. Regarding the limitations of "fixing a thin unvulcanized rubber sheet of the preform sheet to a reel drum of a reel device", "the wires being reel up at a constant pitch onto the preform sheet on the face of the drum", "removing the preform sheet from the reel drum and opening the preform sheet", and "electroless plating", it has been held that during examination, the patentability of a product-by-process claim is determined by the novelty and nonobviousness of the claimed product itself without consideration of the process for making it which is recited in the claim. In re Thorpe, 227 USPQ 964.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michiya in view of Hotta et al. as applied to claim 1 above and further in view of Doi (6,103,359).

Claim 6 additionally recites the arrangement density of the linear conductors being different depending on a predetermined conducting current capacity. Doi discloses an anisotropic conductive connector in which the arrangement density of the linear conductors being different depending on a predetermined conducting current capacity (Figs 1-3, 6 and 7). It would have been obvious that depending on the specific use of the resulting connector, one skilled in the art would arrange the linear conductors of Michiya in different densities to meet the predetermined conducting current capacity as taught by Doi.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

***Summary***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen  
Primary Examiner  
Art Unit 2831